AIN SHAMS UNIVERSITY

MECHANICAL PROPERTIES OF SHELLY SANDY SOIL

(Shear behaviour)

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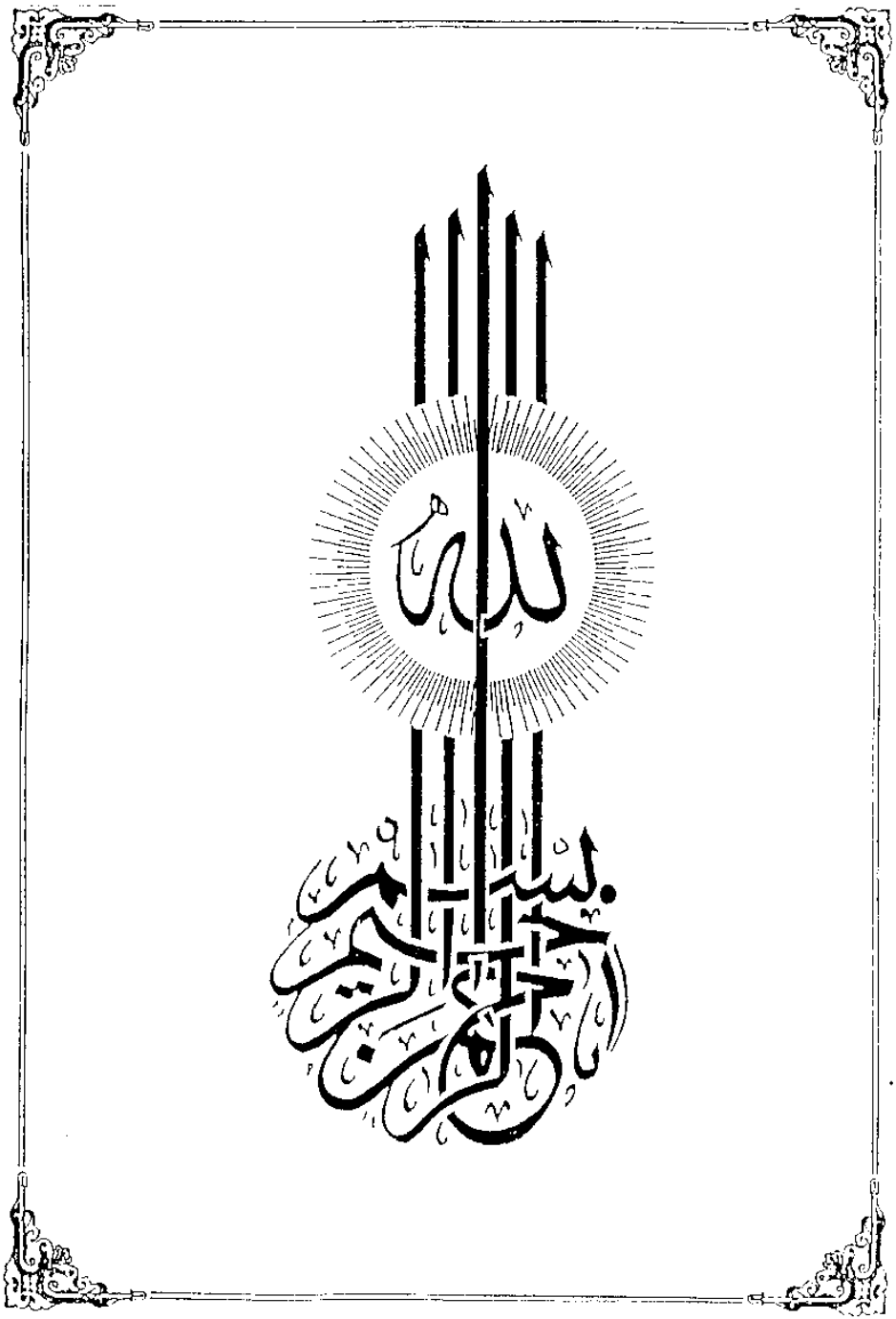

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CHAPTER 1

INTRODUCTION

1.1 General

Geological studies proved that the Mediterranean Sea invaded a vast area of Egypt in several eras. Recent gelogical studies and geotechnical investigations confirmed that marine deposits compose a major portion of surfacial soil and rock formations in Egypt.

Abu Al-Izz ('97'), stated that in earliest geologic times, the Sea of Tethys covered part of Egypt. During later gelogic ages, the land of Egypt uplifted retreating the Sea of Tethys. Abu Al-Izz (op cit) suggested that the retreating sea must have left behind it various sediments and remnants of the living things which it contained. He stated also that a third sedimentary surface, the Miocene surface, was produced by degradation and the subsequent invation of the Miocene sea.

Abu Al-Izz (op cit) indicated that sea level at that time was 180m higher than at the present. He stated also that the Egyptian coast line retreated southward to a position slightly north of Cairo and Wadi Al-Natrun; i.e., the entire delta area was covered by sea water. The sea also penetrated the Nile Valley for about 800 Km (to latitude of Kum Umbu) transforming the valley into an elongated estuary.